

Patent claims

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1. Multi-component kit for a curable composition for fixing purposes, comprising an epoxy resin component (a), which comprises curable epoxides, and a hardener component (b), which comprises a Mannich base formulation, characterized in that the Mannich base formulation has H equivalents in the range from 40 to 80,
10 a viscosity in the range from 500 to 2700 mPas and a content of free phenol derivatives of 20 % by weight or less.

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2. Multi-component kit according to claim 1, especially a two-component kit, characterized in that the Mannich base formulation has a content of free amines of 35 % by weight or more.

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3. Multi-component kit according to either one of claims 1 and 2, characterized in that the Mannich bases in the Mannich base formulation are contained in a proportion of from 10 to 55 % by weight, preferably from 15 to 25 % by weight.

4. Multi-component kit according to any one of claims 1 to 3, characterized in that flexibilizers, especially benzyl alcohol, are contained in the Mannich base formulation in a proportion of 20 % by weight or less.

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5. Multi-component kit according to any one of claims 1 to 4, characterized in that the Mannich bases in the Mannich base formulation are prepared with reaction of the phenol derivatives to leave 20 % by weight, preferably 15 % by weight, phenol derivatives or less.

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6. Multi-component kit according to any one of claims 1 to 5, characterized in that the Mannich bases in the Mannich base formulations are obtainable from phenol derivatives, preferably bisphenols, especially bisphenol A; polyamines, preferably araliphatic diamines, especially m-xylylenediamine, aliphatic amines and/or cycloaliphatic amines; and formaldehyde.

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7. Multi-component kit according to any one of claims 1 to 6, characterized in that for the preparation of the Mannich bases there are used meta-xylylenediamine, also an aliphatic or a cycloaliphatic diamine, or combinations of two or more thereof.
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8. Multi-component kit according to any one of claims 1 to 7, characterized in that the Mannich base formulation has H equivalents in the range from 45 to 75, a viscosity in the range from 1000 to 2000 mPa.s and a content of free phenol derivatives of 20 % by weight or less.
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9. Multi-component kit, especially a two-component kit, according to any one of claims 1 to 8, characterized in that the ratio by weight of components (a) : (b) is 10 : 1 or less, especially 5 : 1 or less, preferably 3 : 1 or less, the lower limit in each case advantageously being 1 : 1.
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10. Multi-component kit according to any one of claims 1 to 9, characterized in that it comprises in component (b) additionally a tertiary amino compound, preferably a tert-aminophenol, especially a 2,4,6-tris(di-C₁-C₆alkylamino)phenol, preferably 2,4,6-tris(dimethylamino)phenol.
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11. Use of a multi-component kit according to any one of claims 1 to 10 for fixing anchoring elements, characterized in that the components of the kit are mixed together and introduced into cavities in the surface of a substrate.
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12. Use of a multi-component kit according to any one of claims 1 to 10 for fixing fibres, scrims, fabrics or composites for the reinforcement of buildings.
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13. Use of a Mannich base formulation having Mannich bases with H equivalents in the range from 40 to 80, a viscosity in the range from 500 to 2700 mPas and a content of free phenol derivatives of 20 % by weight or less, for the preparation of hardeners for epoxy resins having an extended processing temperature range and for increasing the bond stress in the cured state even at high temperatures, it also being possible for the Mannich base formulation in question to be complete only once one or more of its components has been mixed with further constituents of the hardener component (b).
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